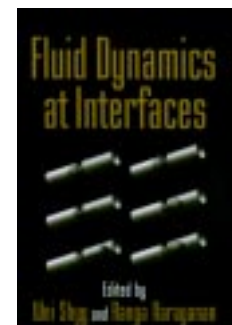
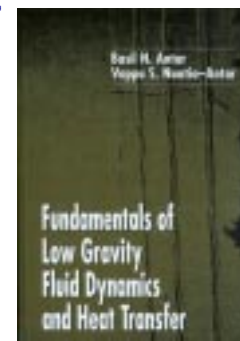
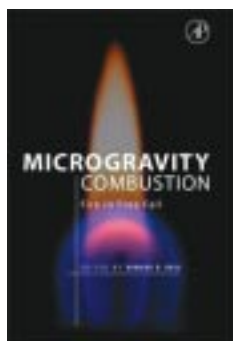
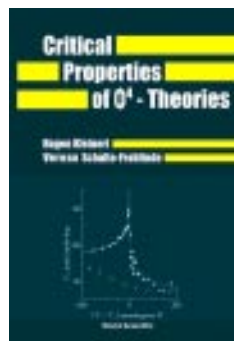
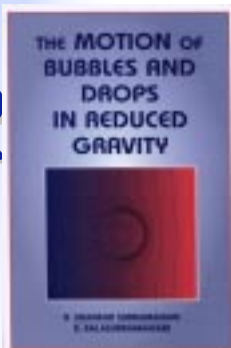


The Physical World: OBPR Research

E. Trinh
NASA HQ





Physical Sciences and the OBPR Organizing Questions

O
B
P
R

How can we educate and inspire the next generations to take the journey?

How can we assure the survival of humans traveling far from earth?

What technology must we create to enable the next explorers to go beyond where we have been?

PSR Strategic Research for Exploration

PSR Fundamental and Applied Research

How does life respond to gravity and space environments?

What new opportunities can our research bring to expand our understanding of the fundamental laws of Nature and enrich lives?



**Research for
Science and
Exploration**



"The common ideas of physics have been applied over distances ranging from the realm of string theory to the furthest reaches of the universe. The results have allowed an understanding of a staggering variety of phenomena and lay the foundation for further research as we probe new frontiers at all distances." (NRC/BPA report)



Bioengineering



Biotechnology

Fluids



Combustion

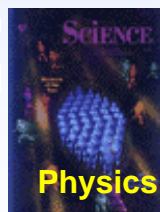
μ G



Materials



**Biomolecular
Physics**

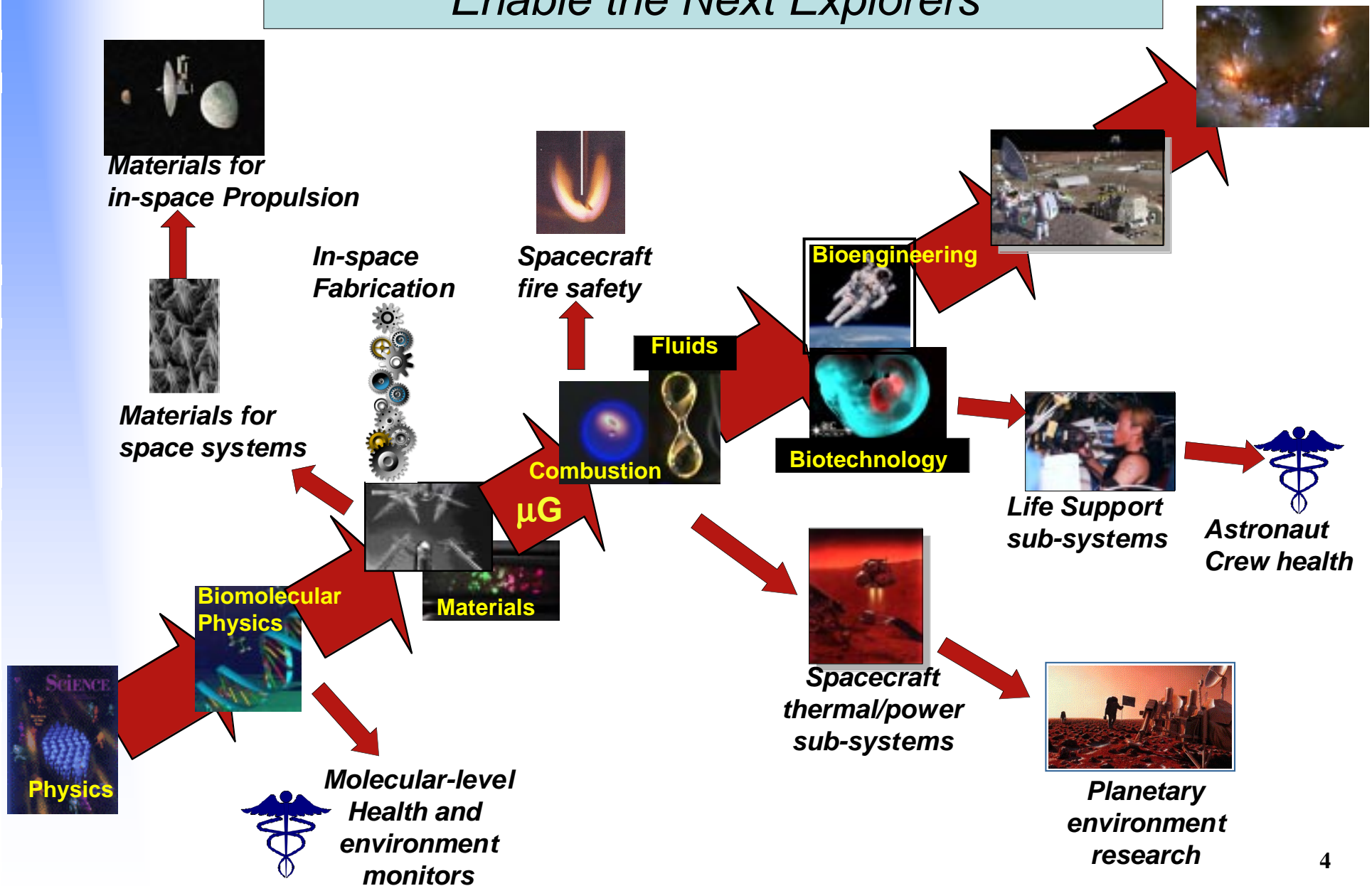


**OBPR Physical Sciences
Research Discipline Elements**



Strategic Research for Exploration

Enable the Next Explorers



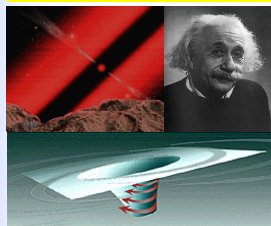


Standard Model

Fundamental Laws and Quantum Systems

Expand our Understanding and Enrich Lives

Relativity Test



Department of Energy
AMS collaboration

Department of Commerce
NIST investigators



Space-based
Atomic clocks

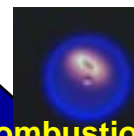
Biomolecular
Physics



μ G

Materials

Combustion



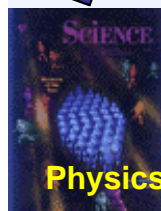
Fluids



Biotechnology



Bioengineering

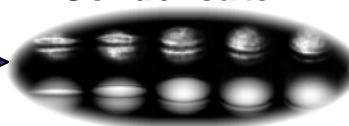


Physics

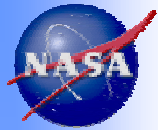


Low-Temperature
Physics

Bose-Einstein
Condensate

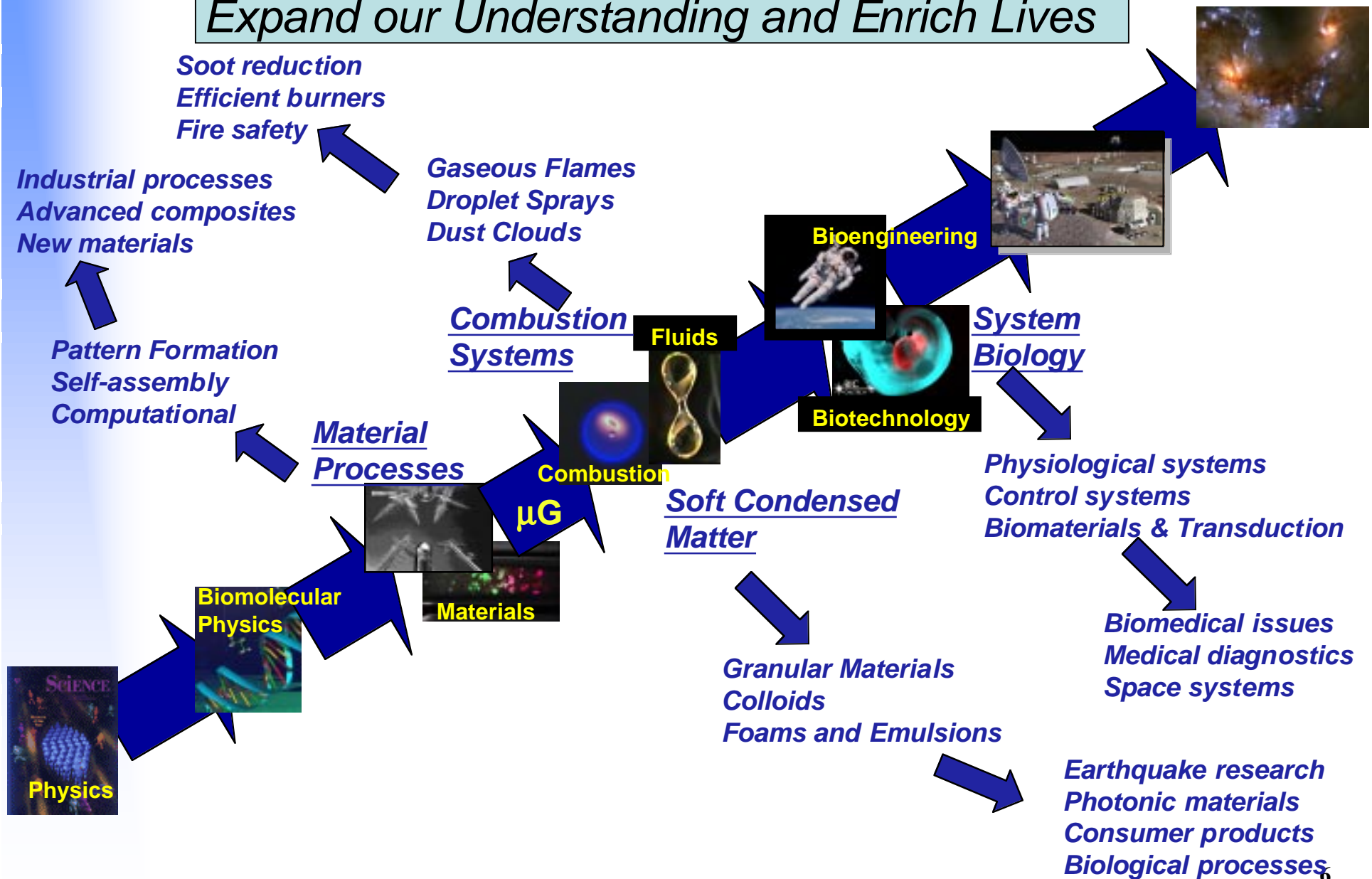


Atom Laser
Research



Complex Systems and Materials

Expand our Understanding and Enrich Lives





Bioscience and Engineering

Expand our Understanding and Enrich Lives

